

c4
determining the viscosity of the motor oil in accordance with the engine frictional torque; and

determining a start torque and a consumed engine acceleration power, the engine frictional torque being determined in the engine frictional torque determining step in accordance with the start torque and the consumed engine acceleration power.

51. (Amended) The method according to claim 50, wherein the start torque is determined in the start torque and consumed engine acceleration power determining step in accordance with an electric power consumed by a starter and a known starter characteristic.

REMARKS

I. Introduction

Claims 33, 36 and 39 to 52 are pending in the present application. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants again note that the Office Action mailed on July 24, 2001 stated that "no explanation of relevance" was provided with respect to German Published Patent Application Nos. 32 38 195 A1 and 41 31 969 C2, cited by Applicants in the Information Disclosure Statement and listed on the PTO-1449 paper filed on September 26, 2001. Pursuant to 37 C.F.R. § 1.98(a)(3), any information disclosure statement shall include a concise explanation of relevance of each patent, publication, or other information listed that is not in the English language. The concise explanation "may be either separate from the specification or incorporated therein." 37 C.F.R. § 1.98(a)(3) (emphasis added). With respect to German Published Patent Application No. 32 28 195 A1, the Examiner will note that the Specification provides a concise explanation of relevance at page 2, lines 15 to 19. With respect to German Published Patent Application No. 41 31 969 C2, the Examiner will note that the Specification provides a concise explanation of relevance at page 2, lines 7 to 13. It is therefore respectfully submitted that the Information Disclosure Statement and PTO-1449 paper fully satisfies the requirements of 37 C.F.R. § 1.98 with respect to German Published Patent Application Nos.

32 38 195 A1 and 41 31 969 C2. Applicants again respectfully request consideration of these publications by the Examiner and again respectfully request that the Examiner provide an initialed copy of the PTO-1449 paper with the next Office communication indicating consideration of these publications.

II. Objection to the Drawings

The drawings were objected to on the basis that "the drawings lack the structural detail essential for the proper understanding of the disclosed invention because the individual blocks of the block diagrams as shown in the drawings are not labeled." Final Office Action at p. 2. While Applicants respectfully disagree, to facilitate matters, the Examiner will note that enclosed herewith are proposed amendments to Figures 1 and 2 to add labels as requested. No new matter has been added. In view of the foregoing, it is respectfully submitted that this objection has been obviated, and withdrawal of this objection is therefore respectfully requested.

III. Rejection of Claims 33, 36, 39 to 44 and 49 to 52 Under 35 U.S.C. § 112

Claims 33, 36, 39 to 44 and 49 to 52 were rejected under 35 U.S.C. § 112, second paragraph as indefinite for allegedly failing to particularly point out and distinctly claim the subject matter of the invention.

The Final Office Action contends that claim 39 is "incomplete for omitting essential structural cooperative relationships of elements." Final Office Action at p. 4. While Applicants respectfully disagree, to facilitate matters, claim 39 has been amended herein without prejudice to recite "determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine." In view of the foregoing, it is respectfully submitted that this rejection has been obviated with respect to claim 39.

With respect to claim 43, the Final Office Action contends that "the phrase 'the engine acceleration power consumed' is indefinite as to the specific meaning thereof." Final Office Action at p. 4. While Applicants respectfully disagree, to facilitate matters, claim 43 has been amended herein without prejudice to change "the engine acceleration power" to --a consumed engine acceleration

power--. In view of the foregoing, it is respectfully submitted that this rejection has been obviated with respect to claim 43.

With respect to claim 49, the Final Office Action contends that "the phrase 'the internal combustion engine includes a diesel engine' is indefinite as to how one engine can include another engine." Final Office Action at p. 4. While Applicants respectfully disagree, to facilitate matters, claim 49 has been amended herein without prejudice to change "wherein the internal combustion engine includes a diesel engine" to --wherein the internal combustion engine is a diesel engine--. In view of the foregoing, it is respectfully submitted that this rejection has been obviated with respect to claim 49.

With respect to claim 50, the Final Office Action contends that "the phrase 'the engine acceleration power consumed' (lines 2 & 4) is indefinite as to the specific meaning thereof." Final Office Action at p. 5. While Applicants respectfully disagree, to facilitate matters, claim 50 has been amended herein without prejudice to change "determining a start torque and an engine acceleration power consumed, the engine frictional torque being determined in the engine frictional torque determining step in accordance with the start torque and the engine acceleration power consumed" to --determining a start torque and a consumed engine acceleration power, the engine frictional torque being determined in the engine frictional torque determining step in accordance with the start torque and the consumed engine acceleration power--. In view of the foregoing, it is respectfully submitted that this rejection has been obviated with respect to claim 50.

With respect to claim 51, the Final Office Action contends that "the phrase 'the engine acceleration power consumed' is indefinite as to the specific meaning thereof." Final Office Action at p. 5. While Applicants respectfully disagree, to facilitate matters, claim 51 has been amended herein without prejudice to change "engine acceleration power consumed" to --consumed engine acceleration power--. In view of the foregoing, it is respectfully submitted that this rejection has been obviated with respect to claim 51.

In view of the foregoing, it is respectfully submitted that claims 33, 36, 39 to 44 and 49 to 52 fully comply with the requirements of 35 U.S.C. § 112, and withdrawal of this rejection is therefore respectfully requested.

IV. Rejection of Claims 33, 36, 39 and 40 Under 35 U.S.C. § 103(a)

Claims 33, 36, 39 and 40 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 4,888,976 ("Vermeiren") in view of U.S. Patent No. 6,223,589 ("Dickert et al."). Applicants respectfully submit that the combination of Vermeiren and Dickert et al. does not render obvious the present claims for the following reasons.

As an initial matter, U.S. Patent No. 6,223,589 issued on May 1, 2001 from U.S. Patent Application Serial No. 09/299,126 ("the '126 application"), filed on **April 26, 1999**, which purports to be a continuation of PCT/EP99/05748, filed on **October 17, 1997**. Since the '126 application was filed as a continuation application, rather than as a national stage application, the effective date of Dickert et al. as a reference is its earliest effective filing date, excluding any international filing dates. See, M.P.E.P. § 1896. Accordingly, the effective date of Dickert et al. as a reference is **April 26, 1999**. The present application has a U.S. filing date of **August 18, 2000**, was filed under 35 U.S.C. § 371 as a national stage application of International Patent Application No. PCT/EP98/06966, filed on **November 4, 1998** and claims priority to German Patent Application No. 197 49 364.5, filed on **November 7, 1997**. Since the effective date of Dickert et al. as a reference is **April 26, 1999**, Dickert et al. do not constitute prior art against the present application.

Notwithstanding the foregoing, it is respectfully submitted that Vermeiren does not render obvious the present claims for the following reasons.

Claim 39 relates to a method of determining motor oil quality. Claim 39 as amended herein recites that the method includes the steps of determining a viscosity of the motor oil during operation of an internal combustion engine and determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine.

Vermeiren purports to relate to a device for measuring the effective viscosity of a lubricant. The Final Office Action contends that Vermeiren describes the steps of "determining a viscosity of the motor oil during operation of an internal combustion engine" and "determining and evaluating a change of the viscosity as an inherent function of a temperature and as a function of the power required to obtain a given motor speed." Final Office Action at pp. 5 to 6. In support of this rejection,

the Final Office Action merely cites col. 1, lines 18 to 21, which state that “[t]he viscosity is determined by measuring the power that must be supplied to the motor to obtain a given motor speed.” In the cited portion, Vermeiren fails to disclose, or even suggest, the step of “determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine” as recited in amended claim 39. Indeed, Vermeiren states at col. 1, lines 21 to 24 that “[w]ith this known device, only an average viscosity of the lubricant can be measured, which is inadequate for the purpose of determining the quality of the lubricant for bearing applications” (emphasis added). Thus, it is respectfully submitted that Vermeiren does not explicitly or inherently disclose, or even suggest, the step of “determining and evaluating a change of the viscosity as an inherent function of a temperature and as a function of the power required to obtain a given motor speed” as recited in amended claim 39.

The Final Office Action states that “[a]lthough Vermeiren fails to explicitly teach that the change in viscosity is a function of engine temperature, the Examiner contends that such a teaching is inherent because as [sic] it is very well known to one having ordinary skill in the art, as surely the Applicant [sic] can appreciate, oil viscosity is very dependent upon engine temperature.” Office Action at p. 6. Applicants respectfully traverse this contention to the extent that it is maintained and requests that the Examiner provide specific evidence to establish those assertions and/or contentions under 37 C.F.R. § 1.104(d)(2) or otherwise. In particular, it is respectfully requested that the Examiner provide an affidavit and/or that the Examiner provide published information concerning these assertions. This is because this rejection is apparently being based on assertions that draw on facts within the personal knowledge of the Examiner, since no support was provided for these otherwise conclusory and unsupported assertions. (See also MPEP § 2144.03).

Moreover, judicial or official notice that is based on subjective and unsupported reasoning will not sustain an obviousness rejection. In the M.P.E.P. cited case of In re Ahlert, 165 U.S.P.Q. 418, 420-21 (C.C.P.A. 1970)), the Court made plain that:

Assertions of technical facts in areas of esoteric technology must always be supported by citation to some reference work recognized as standard in the pertinent art and the appellant

given, in the Patent Office, the opportunity to challenge the correctness of the assertion or the notoriety or repute of the cited reference. **All gations conc rning sp cific "knowledg " of the prior art, which might b p culiar to a particular art should also b supported and th app llant similarly given the opportunity to make a challenge.**

In re Ahlert, 165 U.S.P.Q. at 420 to 21 (citations omitted).

Otherwise, if the Examiner cannot provide either references or an affidavit to support these contentions, it is respectfully requested that the rejections of the claims under 35 U.S.C. § 103 be withdrawn for this reason alone.

The Final Office Action admits that "Vermeiren fails to teach the determining of a change in oil viscosity as a function of frictional torque of the engine." Final Office Action at p. 6. However, the Final Office Action contends that "it would have been obvious to one having ordinary skill in the art armed with said teaching to determine a change in oil viscosity as a function of frictional torque of the engine." Final Office Action at p. 6. In this regard, the Final Office Action contends that "Vermeiren discloses in col. 1, lines 11-13 that oil viscosity is determined from a measured motor parameter," that "Applicant [sic] has claimed that the oil viscosity is determined from a measured motor parameter in that frictional torque is a measured motor parameter," "the Applicant [sic] has defined the frictional torque as being the difference between the starter power and the acceleration power" and that "Vermeiren teaches (col. 1, lines 18-20) that the measured motor parameter is the power required to obtain a given motor speed which would suggest to one having ordinary skill in the art as being the frictional power from which the Applicant [sic] claimed frictional torque is determined." Final Office Action at pp. 6 to 7. Applicants respectfully disagree.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck &

Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As indicated above, Vermeiren does not disclose, or even suggest the step of "determining and evaluating a change of the viscosity as an inherent function of a temperature and as a function of the power required to obtain a given motor speed" as recited in amended claim 39. Moreover, the obviousness rejection appears to be improperly based on Applicants' own disclosure rather than the disclosure of Vermeiren.

In addition, obviousness must be determined with reference to that which would have been obvious to one of ordinary skill in the art at the time the invention was made, and not to the inventor. Environmental Designs, Ltd. v. Union Oil Co., 713 F.2d 693, 218 U.S.P.Q. 865 (Fed. Cir. 1983), cert. denied, 464 U.S. 1043 (1984). The Final Office Action does not even allege that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vermeiren as proposed. In view of the foregoing, it is respectfully submitted that Vermeiren does not render obvious amended claim 39.

Moreover, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Final Office Action's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Final Office Action reflects a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

. . . .

Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to depict the claimed invention.

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the present Final Office Action offers no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the reference to provide the claimed subject matter.

More recently, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a "technologically simple concept" -- which is not the case here -- there still must be some finding as to the "specific understanding or principle within the knowledge of a skilled artisan" that would motivate a person having no knowledge of the claimed subject matter to "make the combination in the manner claimed," stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to

combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Again, it is believed that there have been no such findings.

Accordingly, there is no evidence that the references relied upon, whether taken alone, combined or modified, would provide the features and benefits of claim 39 as amended herein. It is therefore respectfully submitted that amended claim 39 is allowable for these reasons.

As for claims 33, 36 and 40, which ultimately depend from claim 39 and therefore include all of the limitations of claim 39, it is respectfully submitted that Vermeiren does not render obvious these dependent claims for at least the same reasons given above in support of the patentability of claim 39. In re Fine, supra (any dependent claim depending from a non-obvious independent claim is non-obvious).

V. Rejection of Claims 33, 36 and 45 to 47 Under 35 U.S.C. § 103(a)

Claims 33, 36 and 45 to 47 were rejected under 35 U.S.C. § 103(a) as unpatentable over Vermeiren. Applicants respectfully submit that Vermeiren does not render obvious the present claims for the following reasons.

Claim 45 relates to a method of determining viscosity of motor oil of an internal combustion engine. Claim 45 recites that the method includes the steps of determining an engine frictional torque and determining the viscosity of the motor oil in accordance with the engine frictional torque.

The Final Office Action contends that "[c]laim 45 parallels that of claim 39 but does not require the particulars of the engine temperature as in claim 39 nor the determining of the change in oil viscosity." Final Office Action at p. 7. Applicants respectfully disagree. As indicated above, claim 39 recites that the method includes the steps of determining a viscosity of the motor oil during operation of an internal combustion engine and determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine. Claim 45 recites that the method includes the

steps of determining an engine frictional torque and determining the viscosity of the motor oil in accordance with the engine frictional torque.

The Final Office Action admits that “Vermeiren fails to teach the determining of a change in oil viscosity as a function of frictional torque of the engine.” Final Office Action at p. 6. However, the Final Office Action contends that “it would have been obvious to one having ordinary skill in the art armed with said teaching to determine a change in the oil viscosity as a function of frictional torque of the engine” and that “[t]he motivation being that Vermeiren discloses in col. 1, lines 11-13 that the oil viscosity is determined from a measured motor parameter.” Final Office Action at p. 6. The Final Office Action further contends that “Vermeiren teaches (col. 1, lines 18-20) that the measured motor parameter is the power required to obtain a given motor speed which would suggest to one having ordinary skill in the art as being the friction power from which the Applicant [sic] claimed frictional torque is determined.” Final Office Action at pp. 6 to 7. At col. 1, lines 18 to 21, Vermeiren states that “[t]he viscosity is determined by measuring the power that must be supplied to the motor to obtain a given motor speed.” However, Vermeiren further states that “[w]ith this known device, only an average viscosity of the lubricant can be measured, which is inadequate for the purpose of determining the quality of the lubricant for bearing applications, since in bearings a lubricant is generally present only in a thickness of less than one micron.” Col. 1, lines 21 to 26 (emphasis added). Thus, it is respectfully submitted that Vermeiren does not disclose, or even suggest, the step of determining the viscosity of the motor oil in accordance with the engine frictional torque as recited in claim 45. Indeed, the Final Office Action improperly relies on Applicants’ own disclosure in support of the rejection and improperly reflects an “obvious to try” standard, which, as indicated above, cannot support an obviousness rejection. Moreover, the Final Office Action does not even allege that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Vermeiren as proposed.

In view of all of the foregoing, it is respectfully submitted that Vermeiren does not render obvious claim 45.

As for claims 33, 36, 46 and 47, which ultimately depend from claim 45 and therefore include all of the limitations of claim 45, it is respectfully submitted that Vermeiren does not render obvious these dependent claims for at least the same reasons given above in support of the patentability of claim 45. In re Fine, supra.

VI. Allowable Subject Matter

Applicants note with appreciation the indication of allowable subject matter contained in claims 41 to 44 and 48 to 52. In this regard, the Examiner will note that each of claims 41, 44 and 48 to 50 has been rewritten herein in independent form to include all limitations of its respective base claim and any intervening claims. It is therefore respectfully submitted that claims 41, 44 and 48 to 50 are in condition for immediate allowance. As for claims 42 and 43, which depend from claim 41, and claims 51 and 52, which depend from claim 50, it is respectfully submitted that these claims are also in condition for immediate allowance.

VII. Conclusion

Attached hereto is a marked-up version of the changes made to the claims by the current Amendment. The attached page is captioned "**Version with Markings to Show Changes Made.**"

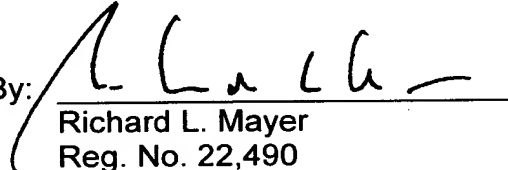
It is therefore respectfully submitted that all of the presently pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

KENYON & KENYON

Dated: 6/14/02

By:


Richard L. Mayer
Reg. No. 22,490

One Broadway
New York, New York 10004
(212) 425-7200

CUSTOMER NO. 26646



26646

PATENT TRADEMARK OFFICE

COPY OF PAPERS
ORIGINALLY FILED

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 39, 41, 43, 44 and 48 to 51 have been amended without prejudice as follows:

39. (Amended) A method of determining motor oil quality, comprising the steps of:

determining a viscosity of the motor oil during operation of an internal combustion engine; and

determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine.

41. (Amended) [The] A method [according to claim 39, further comprising the step of] of determining motor oil quality, comprising the steps of:

determining a viscosity of the motor oil during operation of an internal combustion engine;

determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine; and

determining starter torque, the viscosity change determining and evaluating step including the substep of determining the frictional torque in accordance with the starter torque.

43. (Amended) The method according to claim 41, wherein the viscosity change determining and evaluating step includes the substep of determining the frictional torque in accordance with the starter torque and [the] a consumed engine acceleration power [consumed].

44. (Amended) [The] A method [according to claim 39, further comprising the step of] of determining motor oil quality, comprising the steps of:

VERSION WITH MARKINGS TO SHOW CHANGES MADE

determining a viscosity of the motor oil during operation of an internal combustion engine;

determining and evaluating a change of the viscosity of the motor oil determined in the viscosity determining step as a function of a temperature and frictional torque of the engine; and

determining whether the change of the viscosity is outside a range of -15% to +50% of a predefined viscosity value at a same temperature, the viscosity change determining and evaluating step being performed in accordance with the step of determining whether the change of the viscosity is outside the range of -15% to +50% of the predefined viscosity value at the same temperature.

48. (Amended) [The] A method [according to claim 47,] of determining viscosity of motor oil of an internal combustion engine, comprising the steps of:
determining an engine frictional torque; and
determining the viscosity of the motor oil in accordance with the engine frictional torque;

wherein the engine frictional torque is determined in the engine frictional torque determining step in accordance with engine data available in an engine controller; and

wherein the engine data includes:

- an engine torque generated in accordance with at least one of an injection time and a throttle valve position;
- a signal that indicates whether a torque is transmitted to a drive train; and
- at least one signal relating to an operating condition of at least one auxiliary unit driven by the engine.

49. (Amended) [The] A method [according to claim 47,] of determining viscosity of motor oil of an internal combustion engine, comprising the steps of:
determining an engine frictional torque; and

VERSION WITH MARKINGS TO SHOW CHANGES MADE

determining the viscosity of the motor oil in accordance with the engine frictional torque;

wherein the engine frictional torque is determined in the engine frictional torque determining step in accordance with engine data available in an engine controller; and

wherein the internal combustion engine [includes] is a diesel engine, the engine data including:

 a signal that indicates whether a torque is transmitted to a drive train;

 a load signal of a generator as a measure of an electric power generated by a generator;

 an engine rpm;

 an injected amount of fuel;

 an engine temperature; and

 an ambient temperature.

50. (Amended) [The] A method [according to claim 45, further comprising the step of] of determining viscosity of motor oil of an internal combustion engine, comprising the steps of:

determining an engine frictional torque;

determining the viscosity of the motor oil in accordance with the engine frictional torque; and

 determining a start torque and [an] a consumed engine acceleration power [consumed], the engine frictional torque being determined in the engine frictional torque determining step in accordance with the start torque and the consumed engine acceleration power [consumed].

51. (Amended) The method according to claim 50, wherein the start torque is determined in the start torque and consumed engine acceleration power [consumed]

Application Serial No. 09/530,936

VERSION WITH MARKINGS TO SHOW CHANGES MADE

determining step in accordance with an electric power consumed by a starter and a known starter characteristic.